

Proposed Claims:

Claim 1 (Currently amended). A method of modifying a video signal and/or copy protected video signal formed of video lines having horizontal blanking intervals (HBI), color burst signals, and/or horizontal (H) sync signals having a sync tip level, to provide a copy protection effect for the video signal or to enhance the copy protected video signal, wherein the copy protected video signal is viewable or watchable, comprising:

applying a negative-going presync pulse of substantially said sync tip level followed by a positive-going pulse in a front porch region of the HBI immediately prior to the H sync signal, to provide copy protection for the video signal or to enhance the playability and/or the effectiveness of the copy protected video signal.

Claim 2 (Previously amended). The method of claim 1 wherein the negative-going presync pulse is about 0.8 to 1.3 microseconds duration and the positive-going pulse is about 0.3 to 0.8 microseconds duration.

Claim 3 (Previously amended). The method of claim 2 wherein the negative-going presync pulse has an amplitude of about 40 IRE, and the positive-going pulse has an amplitude of about 30 to 130 IRE.

Claim 4 (Previously amended). The method of claim 1 including:
inserting an additional portion of color burst signal in the front porch, H sync and/or back porch regions of the HBI.

Claim 5 (Previously amended). The method of claim 1 including:
adding an extra post sync negative-going pulse after the H sync signal in the back porch region of the HBI.

Claim 6 (Previously amended). The method of claim 1 wherein the negative-going presync pulse of substantially said sync tip level is applied at or within the end of the active video line.

Claim 7 (Previously amended). The method of claim 1 wherein an additional negative-going pulse is added to at least a latter portion of the negative-going presync pulse.

Claim 8 (Currently amended). A method of modifying a video signal and/or copy protected video signal including video lines having horizontal blanking intervals (HBI), color burst signals, pseudo sync signals, AGC signals, and/or horizontal (H) sync signals having a sync tip level, to provide a copy protection effect for the video signal or to enhance the copy protected video signal, wherein the copy protected video signal is viewable or watchable, comprising:

applying an added negative-going pulse to at least a portion of the H sync signal and/or an added negative going pulse to at least a portion of the pseudo sync signal, to provide a negative-going amplitude extension of the H sync signal and/or of the pseudo sync signal.

Claim 9 (Previously amended). The method of claim 8 wherein the amplitude extending negative-going pulse added to the H sync and/or the pseudo sync signals has a duration of about 1.0 to 1.5 microseconds and an amplitude of about 10 to 50 IRE.

Claim 10 (Original). The method of claim 8 wherein the H sync or pseudo sync signal is reduced in amplitude.

Claim 11 (Currently amended). A method of modifying a video signal and/or copy protected video signal formed of video lines having horizontal blanking intervals (HBI), color burst signals, and/or horizontal (H) sync signals having a sync tip level, to provide and/or enhance the video signal and/or copy protected video signal, wherein the copy protected video signal is viewable or watchable, comprising:

applying a narrow negative-going presync pulse of substantially said sync tip level in a front porch region of the HBI prior to the H sync signal; and

applying a narrow positive-going pulse between the narrow negative-going pulse and the H sync signal in a selected percentage of video lines which include the negative-going pulse, to

provide copy protection while maintaining or enhancing the playability of the resulting copy protected video signal.

Claim 12 (Previously amended). The method of claim 11 wherein the negative-going pulse has a duration of about 0.8 to 1.3 microseconds.

Claim 13 (Original). The method of claim 11 wherein the positive-going pulse has a duration of about 0.3 to 0.8 microseconds and an amplitude of about 30 to 130 IRE.

Claim 14 (Previously amended). The method of claim 11 including:
amplitude modulating the positive-going pulse.

Claim 15 (Previously amended). The method of claim 11 including:
modulating the pulse width of the positive-going pulse.

Claim 16 (Original). The method of claim 11 wherein the percentage of positive-going pulses added to the video lines with negative-going pulses is from 10% to 30%.

Claim 17 (Currently amended). Apparatus for modifying a video signal and/or copy protected video signal formed of video lines having horizontal blanking intervals (HBI), color burst signals, and/or horizontal (H) sync signals having a sync tip level, to provide a copy protection effect for the video signal or to enhance the copy protected video signal, wherein the copy protected video signal is viewable or watchable, comprising:

a circuit for applying a negative-going presync pulse of substantially said sync tip level followed by a positive-going pulse in a front porch region of the HBI immediately prior to the H sync signal, to provide copy protection for the video signal or to enhance the playability and/or the effectiveness of the copy protected video signal.

Claim 18 (Previously added). The apparatus of claim 17 wherein the negative-going presync pulse is about 0.8 to 1.3 microseconds duration and the positive-going pulse is about 0.3 to 0.8 microseconds duration.

Claim 19 (Previously added). The apparatus of claim 18 wherein the negative-going presync pulse has an amplitude of about 40 IRE, and the positive-going pulse has an amplitude of about 30 to 130 IRE.

Claim 20 (Previously added). The apparatus of claim 17 including:
a circuit for inserting an additional portion of color burst signal in the front porch, H sync and/or back porch regions of the HBI.

Claim 21 (Previously added). The apparatus of claim 17 including:
adding an extra post sync negative-going pulse after the H sync signal in the back porch region of the HBI.

Claim 22 (Previously added). The apparatus of claim 17 wherein the negative-going presync pulse of substantially said sync tip level is applied at or within the end of the active video line.

Claim 23 (Previously added). The apparatus of claim 17 wherein an additional negative-going pulse is added to at least a latter portion of the negative-going presync pulse.

Claim 24 (Currently amended). Apparatus for modifying a video signal and/or copy protected video signal formed of video lines having horizontal blanking intervals (HBI), color burst signals, pseudo sync signals, AGC signals, and/or horizontal (H) sync signals having a sync tip level, to provide a copy protection effect for the video signal or to enhance the copy protected video signal, wherein the copy protected video signal is viewable or watchable, comprising:

a circuit for applying an added negative-going pulse to at least a portion of the H sync signal and/or an added negative going pulse to at least a portion of the pseudo sync signal, to

provide a negative-going amplitude extension of the H sync signal and/or of the pseudo sync signal.

Claim 25 (Previously added). The apparatus of claim 24 wherein the amplitude extending negative-going pulse added to the H sync and/or the pseudo sync signals has a duration of about 1.0 to 1.5 microseconds and an amplitude of about 10 to 50 IRE.

Claim 26 (Previously added). The apparatus of claim 24 wherein the H sync or pseudo sync signal is reduced in amplitude.

Claim 27 (Currently amended). Apparatus for modifying a video signal and/or copy protected video signal formed of video lines having horizontal blanking intervals (HBI), color burst signals, AGC signals, and/or horizontal (H) sync signals having a sync tip level, to provide a copy protection effect for the video signal or to enhance the copy protected video signal, wherein the copy protected video signal is viewable or watchable, comprising:

a circuit for applying a narrow negative-going presync pulse of substantially said sync tip level in a front porch region of the HBI prior to the H sync signal; and

a circuit for applying a narrow positive-going pulse between the narrow negative-going pulse and the H sync signal in a selected percentage of video lines which include the negative-going pulse, to provide copy protection while maintaining or enhancing the playability of the resulting copy protected video signal.

Claim 28 (Previously added). The apparatus of claim 27 wherein the negative-going pulse has a duration of about 0.8 to 1.3 microseconds.

Claim 29 (Previously added). The apparatus of claim 27 wherein the positive-going pulse has a duration of about 0.3 to 0.8 microseconds and an amplitude of about 30 to 130 IRE.

Claim 30 (Previously added). The apparatus of claim 27 including:

amplitude modulating the positive-going pulse.

Claim 31 (Previously added). The apparatus of claim 27 including:
modulating the pulse width of the positive-going pulse.

Claim 32 (Previously added). The apparatus of claim 27 wherein the percentage of positive-going pulses added to the video lines with negative-going pulses is from 10% to 30%.

Claim 33 (Currently amended). A method of modifying a video signal and/or a copy protected video signal formed of video lines having horizontal blanking interval (HBI), color burst signals and/or horizontal (H) sync signals having a sync tip level, wherein the copy protected video signal is viewable or watchable, comprising:

applying a negative-going presync pulse of substantially said sync tip level followed by a positive-going pulse in a front porch region of the HBI immediately prior to the H sync signal, to provide copy protection for the video signal or to enhance the playability and/or the effectiveness of the copy protected video signal.

Claim 34 (Currently amended). Apparatus for modifying a video signal and/or a copy protected video signal formed of video lines having horizontal blanking interval (HBI), color burst signals and/or horizontal (H) sync signals having a sync tip level, wherein the copy protected video signal is viewable or watchable, comprising:

a circuit for applying a negative-going presync pulse of substantially said sync tip level followed by a positive-going pulse in a front porch region of the HBI immediately prior to the H sync signal, to provide copy protection for the video signal or to enhance the playability and/or the effectiveness of the copy protected video signal.

Claim 35 (Currently amended). A method of modifying a video signal including video lines having horizontal blanking interval (HBI), pseudo sync, AGC, color burst, and/or horizontal (H) sync signals having a sync tip level, to provide a copy protection effect for the video signal or to enhance a copy protected video signal, wherein the copy protected video signal is viewable or watchable, comprising:

applying an additional negative-going pulse to at least a latter portion of the H sync signal and/or to at least a latter portion of the pseudo sync signal, to provide a negative-going amplitude extension of the H sync signal and/or of the pseudo sync signal.

Claim 36 (Previously added). The method of claim 35 wherein the H sync or pseudo sync signal is reduced in amplitude.

Claim 37 (Currently amended). Apparatus for modifying a video signal formed of video lines having horizontal blanking interval (HBI), pseudo sync, AGC, color burst, and/or horizontal (H) sync signals having a sync tip level, to provide a copy protection effect for the video signal or to enhance a copy protected video signal, wherein the copy protected video signal is viewable or watchable, comprising:

a circuit for applying an additional negative-going pulse to at least a latter portion of the H sync signal and/or to at least a latter portion of the pseudo sync signal, to provide a negative-going amplitude extension of the H sync signal and/or of the pseudo sync signal.

Claim 38 (Currently amended). A method of modifying a video signal and/or a copy protected video signal formed of video lines having horizontal blanking interval (HBI), AGC, color burst, and/or horizontal (H) sync signals having a sync tip level, wherein the copy protected video signal is viewable or watchable, comprising:

applying a negative-going presync pulse of substantially said sync tip level in a front porch region of the HBI prior to the H sync signal, to provide copy protection for the video signal or to enhance the playability and/or the effectiveness of the copy protected video signal.

Claim 39 (Previously added). The method of claim 38 wherein the H sync or pseudo sync signal is reduced in amplitude.

Claim 40 (Previously added). The method of claim 38 wherein the negative-going presync pulse is about 0.8 to 1.3 microseconds duration.

Claim 41 (Previously added). The method of claim 40 wherein the negative-going presync pulse has an amplitude of about 40 IRE.

Claim 42 (Previously added). The method of claim 38 wherein the negative-going presync pulse is applied at or within the end of the active video line.

Claim 43 (Previously added). The method of claim 38 wherein an additional negative-going pulse is added at least to a portion of the negative-going presync pulse.

Claim 44 (Currently amended). Apparatus for modifying a video signal and/or a copy protected video signal formed of video lines having horizontal blanking interval (HBI), pseudo sync, AGC, color burst, and/or horizontal (H) sync signals having a sync tip level, wherein the copy protected video signal is viewable or watchable, comprising:

a circuit for applying a negative-going presync pulse of substantially said sync tip level in a front porch region of the HBI prior to the H sync signal, to provide the modification of the video signal and/or of the copy protected video signal.

Claim 45 (Previously added). The apparatus of claim 44 wherein the negative-going presync pulse is about 0.8 to 1.3 microseconds duration.

Claim 46 (Previously added). The apparatus of claim 45 wherein the negative-going presync pulse has an amplitude of about 40 IRE.

Claim 47 (Previously added). The apparatus of claim 44 wherein the negative-going presync pulse is applied at or within the end of the active video line.

Claim 48 (Previously added). The apparatus of claim 44 wherein an additional negative-going pulse is added to at least a portion of the negative-going presync pulse.

Claim 49 (Withdrawn). A method of modifying a video signal having video lines with at least one horizontal blanking interval (HBI), horizontal (H) sync having a sync tip level, pseudo

sync, automatic gain control (AGC) signal, and/or color burst signal to provide, modify, and/or enhance copy protection, comprising the application of two or more of the following steps:

- adding a negative-going presync pulse of substantially said sync tip level and/or adding a positive-going pulse following the negative-going presync pulse in a front porch region of the HBI prior to the H sync signal;

- blanking the color bursts from the video signal;

- extending an amplitude of a portion of the H sync signal;

- extending an amplitude of a portion of the pseudo sync signal;

- adding a time extended color burst signal to the video signal; and or

- adding an extra sync pulse of substantially said sync tip level after the H sync signal.

Claim 50 (Withdrawn). Apparatus for modifying a video signal having video lines with at least one horizontal blanking interval (HBI), pseudo sync signal, automatic gain control (AGC) signal, color burst signal, and/or horizontal (H) sync signal having a sync tip level, to provide, modify, and/or enhance copy protection, the apparatus comprising two or more of the following elements:

- a generating circuit for adding a negative-going presync pulse of substantially said sync tip level and/or adding a positive-going pulse following the negative-going pulse in a front porch region of the HBI prior to the H sync signal;

- a circuit for removing the color bursts from the video signal;

- a circuit for extending the amplitude of a portion of the H sync signal and/or of the pseudo sync signal;

- a circuit including a color subcarrier regenerator circuit for adding and/or inserting a time extended color burst signal to the video signal; and/or

- a generating circuit for adding an extra sync pulse of substantially said sync tip level after the H sync signal.

Claim 51 (Withdrawn). A method of modifying a video signal and or copy protected video signal having video lines, horizontal blanking intervals, and horizontal sync signals, to provide a reduction in black level depression and or an enhanced playability, comprising:

modifying at least one horizontal sync signal by extending or increasing a horizontal sync amplitude portion of the video signal, to provide the enhanced playability or reduced black level depression when the video signal is viewed on a television set.

Claim 52 (Withdrawn). The method of claim 51 wherein at least one of the H sync or pseudo sync signal is reduced in amplitude.

Claim 53 (Withdrawn). Apparatus for modifying a video signal and or copy protected video signal having video lines, horizontal blanking intervals, and horizontal sync signals, to provide a reduction in black level depression and or enhanced playability, comprising:

a circuit for extending or increasing the amplitude of a portion of at least one of the horizontal sync signals to provide the enhanced playability or reduced black level depression when the video signal is viewed.

Claim 54 (Withdrawn). The apparatus of claim 53 wherein the H sync or pseudo sync signal is reduced in amplitude.

Claim 55 (Withdrawn). A method of modifying a video signal and or copy protected video signal having video lines, horizontal blanking intervals, pseudo sync signals, AGC signals, horizontal sync signals, and/or color burst signals, to provide copy protection effectiveness or copy protection enhancement, comprising:

adding or inserting a time extended phase shifted color burst signal to at least one line of the video signal; and

modifying at least one horizontal sync or pseudo sync signal by extending or increasing a horizontal sync or pseudo sync amplitude portion of the video signal;

thereby providing a video signal with copy protection effectiveness or copy protection enhancement.

Claim 56 (Withdrawn). The method of claim 55 wherein the H sync or pseudo sync signal is reduced in amplitude.

Claim 57 (Withdrawn). Apparatus for modifying a video signal and or copy protected video signal having video lines, horizontal blanking intervals, pseudo sync signals, AGC signals, horizontal sync signals, and/or color burst envelopes, to provide copy protection effectiveness or enhanced copy protection, comprising:

- a generating circuit for providing a time extended color burst signal;
 - a phase shifting circuit for adding or inserting a time extended phase shifted color burst signal to at least one line of the video signal; and
 - a circuit for extending or increasing the horizontal sync or pseudo sync amplitude portion of the video signal;
- to provide the copy protection effectiveness or the enhanced copy protection.

Claim 58 (Withdrawn). The apparatus of claim 57 wherein the H sync or pseudo sync signal is reduced in amplitude.

Claim 59 (Withdrawn). A method of providing a copy protection signal wherein the copy protection signal includes horizontal sync signals, pseudo sync signals, color burst envelopes, and/or AGC pulses, wherein the horizontal sync signals may be of reduced amplitude or of substantially normal amplitude, wherein the AGC pulses cause a copy protection effect on a recorder, comprising:

- extending the amplitude of at least a portion of at least one horizontal sync signal and/or at least one pseudo sync signal, thereby increasing the effectiveness of the copy protection in a recorder.

Claim 60 (Withdrawn). The method of claim 59 wherein at least one color burst envelope is extended in duration.

Claim 61 (Withdrawn). The method of claim 60 wherein the extended color burst envelope includes phase shifting.

Claim 62 (Withdrawn). The method of claim 59 wherein some or all of the AGC pulses may be amplitude, pulse width, or position modulated.

Claim 63 (Withdrawn). The method of claim 60 wherein some or all of the AGC pulses may be amplitude, pulse width, or position modulated

Claim 64 (Withdrawn). The method of claim 61 wherein some or all of the AGC pulses may be amplitude, pulse width, or position modulated.

Claim 65 (Withdrawn). Apparatus for providing a copy protection signal, wherein the copy protection signal includes horizontal sync signals, pseudo sync signals, color burst envelopes, and/or AGC pulses, wherein the horizontal sync signals may be of reduced amplitude or of substantially normal amplitude, wherein the AGC pulses cause a copy protection effect on a recorder, comprising:

a circuit for extending the amplitude of at least a portion of at least one horizontal sync signal and/or at least one pseudo sync signal, thereby increasing the effectiveness of the copy protection in a recorder.

Claim 66 (Withdrawn). The apparatus of claim 65 including:
an AGC pulse circuit for providing the AGC pulses; and
a color burst circuit for providing at least one color burst envelope that is extended in duration.

Claim 67 (Withdrawn). The apparatus of claim 66 wherein the extended color burst circuit includes a phase shifter circuit for providing a phase shifted color burst signal.

Claim 68 (Withdrawn). The apparatus of claim 65 wherein the AGC pulse circuit provides amplitude, pulse width, or position modulation of some or all of the AGC pulses.

Claim 69 (Withdrawn). The apparatus of claim 66 wherein the AGC pulse circuit provides amplitude, pulse width, or position modulation of some or all of the AGC pulses.

Claim 70 (Withdrawn). The apparatus of claim 67 wherein the AGC pulse circuit provides amplitude, pulse width, or position modulation of some or all of the AGC pulses.